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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,327	03/01/2004	Masatoshi Homan	17505	2711

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GARDEN CITY, NY 11530

EXAMINER

SMITH, PHILIP ROBERT

ART UNIT	PAPER NUMBER
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3739

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/790,327	HOMAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Philip R. Smith	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 2, 4, 5, 8-11, 14, 17-20 and 26-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 12, 13, 15 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 7 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/1 &amp; 7/9/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Restrictions and Elections of Species**

- [01] Claims 2, 4-5, 8-11, 14, 17-20 & 26-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group or species, without traverse, as indicated in the correspondence of 10/20/2005.

### **Claim Rejections - 35 USC § 102**

- [02] The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- [03] Claims 1, 3, 6, 12-13, 15 & 21-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiyama et al. (5,209,220).

- [04] With regard to claims 1 & 13: Hiyama discloses an endoscope image pick-up apparatus comprising an image pick-up unit, wherein the image pick-up unit comprises:

[04a] an image pick-up device for capturing an image ("CCD 301," 34/37);

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- [04b] a data processing device for performing the processing for reducing the data amount of the image obtained by the image pick-up device at a plurality of ratios ("blocking circuits 333, 334, and 335," 36/14);
- [04c] a data transmitting device ("image compressing and recording part 308," 34/49) for transmitting the image obtained by the image pick-up device to the extra-corporeal unit ("image recording part 323," 34/52).
- [04d] a characteristic amount detecting device ("histogram making parts 339R, 339G and 339B," 35/5) for detecting a predetermined amount of characteristics based on the image; and
- [04e] a determining device ("peak position detecting circuit 340," 35/5) for determining a valid image (36/53-56) based on an output from the characteristic amount detecting device, and the data transmitting device controls the data transmitting ratio ("blocked video signals of sizes, for example, of 1x2, 2x2 and 3x3," 36/16-18) in accordance with the determining result of the determining device ("on the basis of the control signal of the peak position detecting circuit 340," 35/14-16). Hiyama states the following in 36/57-37/4: "[i]n the general endoscope image... the B component is low in the luminance level... Therefore, the R and B components can be highly compressed by blocking respectively 2x2 and 3x3 sizes... In the dyed endoscope image, the three RGB components have many high frequency components and therefore are compressed at a high picture quality by blocking a 1x2 size." To paraphrase, Hiyama

discloses that images determined to have a large blue component dictate higher picture quality (smaller 'blocks' consisting of fewer pixels), whereas images determined to have a small blue component (relative to the red component) require lower picture quality, allowing for greater compression.

- [05] With regard to claims 3, 6 & 15: Hiyama discloses that the characteristic amount detecting device comprises a pixel number detecting device ("histogram making part 339B") for detecting the number of pixels having a specific color (that of "methylene blue," 36/48-50) in the image as the characteristic amount, and the determining device determines that the image is valid when the number of specific-color pixels (the "peak position" of the 'B' histogram) is a predetermined threshold value (corresponding to the "peak position" of the 'R' histogram) or more (36/48-56).
- [06] With regard to claims 12 & 25: Hiyama discloses a command receiving device ("CCD driving circuit not illustrated," 9/36-37) for receiving a plurality of commands ("CCD driving signal") from the extracorporeal unit. As noted above, the data transmitting device disclosed by Hiyama controls a data transmitting ratio. The command receiving device disclosed by Hiyama is inherently capable of controlling or invalidating control of a data transmitting ratio based on the command received by the command receiving device. For example, by driving the CCD to capture an image, the data will be transmitted at a ratio determined by the data transmitting device (between zero and one); by not driving the CCD to capture an image, the data will not be transmitted (a ratio of zero).

- [07] With regard to claims 21, 22 & 24: As shown above, the "blocking circuits 333, 334, and 335" are inherently capable of reducing image data at a plurality of ratios; switching the bit length of the image data to a plurality of bit lengths; and compressing the image data at a plurality of compressing ratios.
- [08] With regard to claim 23: Hiyama discloses that the data processing device comprises an image cut-out device (structures indicated in Fig. 6, described in 13/33-14/4) for cutting out a part of the image data ("only the image data of the effective image," 14/2) and for outputting the cut-out image.

#### **Allowable Subject Matter**

- [09] Claims 7 & 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose a pixel number comparing and calculating device for comparing and calculating the past number of pixels stored in the pixel number storing device and the current number of pixels and for outputting the change amount of the number of pixels as the characteristic amount, wherein the determinance of a compression ratio is based upon the characteristic amount.

#### **Conclusion**

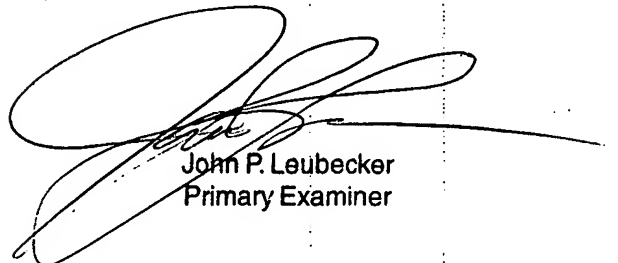
- [10] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Glukhovsky (6,709,387) discloses a pixel number comparing and calculating device for comparing and calculating the past number of pixels stored in the pixel number storing device and the current number of pixels

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and for outputting the change amount of the number of pixels as the characteristic amount, wherein the determinance of a frame capture rate is based upon the characteristic amount. Madar (2004/0092825) discloses a capsule endoscope which treats a patient based on image analysis.

- [11] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip R. Smith whose telephone number is (571) 272 6087 and whose email address is philip.smith@uspto.gov. The examiner can normally be reached between 9:00am and 5:00pm.
- [12] If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (571) 272 4764.
- [13] Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

[14] Prs



John P. Leubecker  
Primary Examiner